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February 11, 1959

Encl #1 to
G-US-0134
COPY 1 OF 10

PROGRESS REPORT NO. 1

by [redacted] STAT

AIRFRAME MANUFACTURING COORDINATION

Three technical coordination meetings have been held with the airframe manufacturer since contract initiation and the fourth is planned for the 12th of February. During the first three, we have established tentative agreements in the areas of engine installation requirements, nominal performance, engine weight, and assignment of development responsibility for various "grey area" components.

Agreement has been reached with both the airframe manufacturer and the contractor relative to purchase of two sub-sonic inlet ducts from the airframe manufacturer for delivery to us. We furnished a duct specification to the airframe manufacturer on February 2, 1959, defining our requirements. It has been agreed that a major scale inlet model program will be conducted jointly by the airframe contractor and us. Our interest will be in the establishment of suitable probe designs and locations for the shock positioner control and for the ramp positioner control. The airframe contractor's interest will lie in major scale evaluation of inlet performance, velocity profiles, etc. The airframe contractor is to furnish the model and we will share jointly the costs of testing on a pro-rated basis. Results from this program may eliminate the necessity of full scale free jet testing.

Several areas remain to be resolved. However, at present, none are delaying the engine development schedule. Some of these areas are: (1) engine endurance demonstration to be required prior to flight, (2) definition of tolerances on engine performance for the purpose of flight planning and acceptance testing, (3) establishment of an engine model specification which would include definition of the Flight Readiness Test, Operational Training Suitability Test*, and Acceptance tests. During the coordination meeting planned for February 12th, we will present to the airframe manufacturer our preliminary specification and our studies relative to engine tolerances and life demonstrations for their comments.

CONTRACTOR COORDINATION

Resolution of exit nozzle design features is being delayed by lack of ability to obtain test time at the [redacted] High Pressure Station. Initial request for test authorization was made verbally on January 14th. Accordingly, the first engine will be built with fixed parts. STAT

We are planning for a meeting here early in the week beginning February 23rd - during which we plan to review program status with the airframe manufacturer and the contractor's representatives.

*Previous correspondence has designated this phase point as PFRT. We are thinking about changing the nomenclature to this one which we consider more appropriate.

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DEVELOPMENT PROGRAM

An existing 30-inch diameter lightweight test engine, which incorporates many features of our planned flight engine, has been repaired and modified for initial test evaluation. Installation in the test cell was begun on February 9th, with first tests planned for February 11th. Objectives of the tests are to evaluate combustion efficiency characteristics, temperature distribution, and improved burner can mounting arrangement under test conditions not evaluated during the original tests of the engine in August 1958.

Orders have been placed for fuel and control system "breadboard" components which are to be evaluated for function and environmental resistance - starting early in March. We are also currently modifying test equipment to accommodate some of the extended environmental features of this application.

Design of the first flight engine has been initiated and long lead time material orders have been placed. Design progress is estimated at approximately 10%.

ADMINISTRATIVE

All engineering work, as well as planning and coordination work relative to manufacturing, purchasing, and test, is now being accomplished within a closed and guarded area in our main engineering building. The staff within this room now numbers [redacted] We plan to move the entire staff to [redacted] on February 23rd. Space there will allow growth up to [redacted] Ultimate size of the group working in the guarded area may

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A closed and guarded area of approximately 3,550 square feet has been established in a building adjacent to our main shop building for engine assembly. This area will eventually accommodate [redacted] people.

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Security checks have been requested for [redacted] people to date.

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Nearly all personnel working within the closed areas have been given a Category "O" security briefing. As clearances are received, Category 1 briefings will be initiated.

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